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PROFESSIONAL COMPETENCY OF AN AVIATION ENGINEER AS A COMPONENT OF THE TRAINING

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Abstract. *The article is devoted to the definition and notion of professional competency and its role in competence formation of an aviation engineer. It refers to engineer's competences that must be upgraded upon training to his performance.*

Keywords: competency formation of an aviation engineer, professional competency.

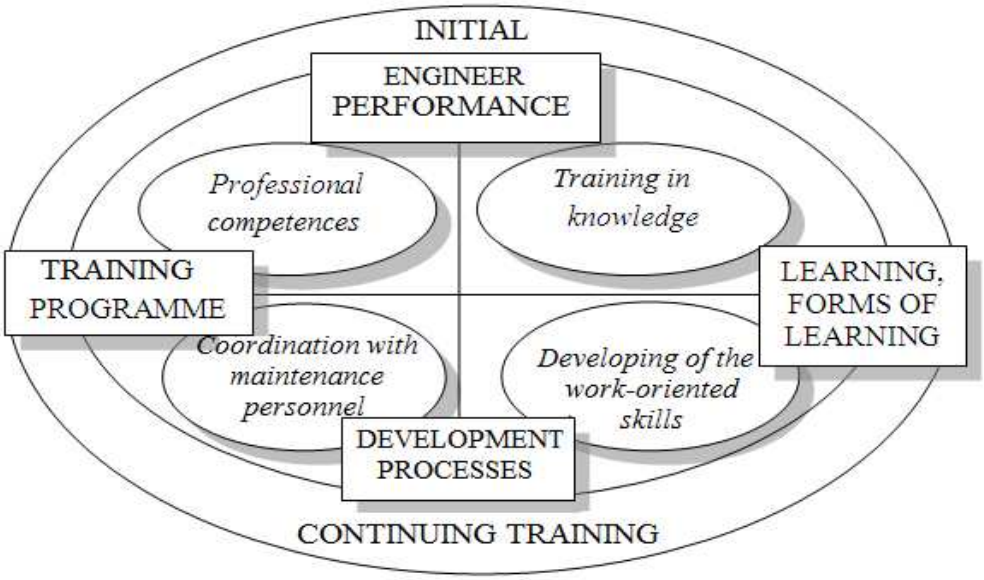
Introduction

Any staff member can be characterized by the presence of his professional knowledge, professional skills, work experience, professional capacity, according to his personal qualities, "sharpened" by executing functional, in his relation to the company, its management and owners, his ability to "fit" in the situation of the company. All these parameters constitute the concept of professional competency.

This article aims to outline current research on professional competency and its formation when aviation engineers training. The main research focus will be on competency components of aviation staff. The topic of competency is closely linked to competency development that have evolved in learning on the strategic challenge to implement professional competency in a sustainable way when performance of aviation engineer.

Review of research results

Each employee has aspired to more profitable to "sell" his professional competency, and the employer – as you can get a bargain. High professional competency in a crisis situation allows workers to keep jobs or find new jobs quickly. In the dynamic changes in the labor market need to know their level of competency, to be prepared for possible future changes in their careers and understand the things which need work (see figure).



Competency formation of the aviation engineer

Getting to the point of the article, it's necessary make clear the problem, that brings on confusion and debate concerning the concept of "competency" that it is impossible to identify or impute a coherent theory or to arrive at a definition capable of accommodating and reconciling all the different ways that the term is used.

To begin with a definition "competence" it's reasonable to note that the term is used both scientifically and in everyday language. Its origins can be seen in the Greek notion of "arête" and the Roman term "virtus", and is generally understood as being concerned with "what people can do rather than what they know". The term has a large variety of meanings, and it can be captured by the terms "ability", "aptitude", "capability", "effectiveness" and "skill". Competence can be attributed to individuals, social groups, "when they possess or acquire the conditions for achieving specific developmental goals and meeting important demands presented by the external environment" [1]. This implies an achievement of permanent attributes which is of value to the community. However, the notion of competence, and its plural, "competences", have, in recent years, been replaced by the narrower version of "competency", or the plural form "competencies", discrete skills and activities which individuals can perform. The terms are often used interchangeably without an appreciation of their different meanings.

Competency is dealing with the ability to handle challenges that occur in a specific situation in an appropriate way. Competency is expressed and demonstrated in an act of performance and it is always related to a specific social context. Van der Blij defines competency with a focus on performance as "... the ability to act within a given context in a responsible and adequate way, while integrating complex knowledge, skills and attitudes" [2].

The definition of Van der Blij seems to integrate consistently the key components that a theoretical concept needs to include for discussing the challenge of competence development and management in the context of training (see table).

Mangham argued that competency may relate to personal models, outcome models or education and training models, as well as to the standards approach in which bench marking criteria are used [3]. Mansfield similarly contrasts three different usages of competency: outcomes (vocational standards describing what people need to be able to do in employment); tasks that people do (describing what currently happens); and personal traits or characteristics (describing what people are like). Weinert lists nine different ways in which competency has been defined or interpreted: general cognitive ability; specialized cognitive skills; competency performance model; modified competency-performance model; objective and subjective self-concepts; motivated action tendencies; action competency; key competency; meta-competency [4].

Competency definition

Components	Characteristics	Levels of observation
Individual dispositions	Abilities, aptitudes, motivations, attitudes, values	Psychological theory
⇩		
To act in		
⇩		
Context-bound situations	Complex, undefined, dynamic	Action theory
⇩		
According to		
⇩		
Consensual standards	Appropriateness, responsibility	Sociological

Due regard must be given to the privilege competency of the certified aviation staff, who works in aviation industry. Doubtless, competency formation is a complicated phenomenon that requires certain theoretical knowledge and practical skills. However, many factors influence successfulness of a process flow to use the competency is required by International Aviation Organizations.

For instance, in accordance with AMC 145.A.30(e) [5], there are procedures require amongst others that planners, mechanics, specialized services staff, supervisors and certifying staff are assessed for competency by 'on the job' evaluation or by examination relevant to their particular job role within the organization before unsupervised work is permitted. Adequate initial and recurrent training should be provided and recorded to ensure continued competence. To assist in the assessment of competency, job descriptions are recommended for each job role in the organization. Basically, the assessment should establish that:

a) planners are able to interpret maintenance requirements into maintenance tasks, and have an appreciation that they have no authority to deviate from the maintenance data;

b) mechanics are able to carry out maintenance tasks to any standard specified in the maintenance data and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards;

c) specialized services staff is able to carry out specialized maintenance tasks to the standard specified in the maintenance data and will both inform and await instructions from their supervisor in any case where it is not possible to complete the specialized maintenance in accordance with the maintenance data;

d) supervisors are able to ensure that all required maintenance tasks are carried out and where not completed or where it is evident that a particular maintenance task cannot be carried out to the maintenance data, then such problems will be reported to the 145.A.30(c) person for appropriate action. In addition, for those supervisors who also carry out maintenance tasks, that they understand such tasks should not be undertaken when incompatible with their management responsibilities;

e) certifying staff are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service.

Actually, in the case of planners, specialized services staff, supervisors and certifying staff, knowledge of organization procedures relevant to their particular role in the organization is important.

According to ICAO Regulation [6], the training programme established by the maintenance organization includes training in knowledge and skills related to human performance, including coordination with other maintenance personnel and flight crew. Consequently, the competency formation of aviation engineer, increasingly turns out to be part of a competency development that strengthens technical, social and personal competency alike and often new opportunities for work-oriented concepts of initial and continuing training. Training programme and learning at work in thus, in principle, embedded into the concept of competency development, which is internationally established, but interpreted quite underlying differently in terms of content and concept, especially with regard to the underlying concept of competency. For instance, in the context of the development of a European Qualifications Framework competency is defined by the European Commission as the ability to use combine, in a self-directed way, specific knowledge, skills and professional as well as personal behavioral dispositions in particular context, i.e. a work or learning situation [7].

Conclusions

Generalizing various definitions, the concept of competency can be understood as skills, methods, knowledge, attitudes and values whose acquisition, development and application relate to the entire lifespan of human being.

Competency development is viewed from the perspective of the subject, his or her abilities and interests, and as a subject-oriented concept it also includes the dimension of education. The development of competence as a process along the life-course takes place in the world of work and in the world of one’s overall life via individual learning and development processes in different types and forms of training.

The narrower concept of professional competency refers especially to skills, methods, knowledge, qualifications and attitudes that form the basis for the professional, social and human work activities of the individual.

Moreover, in order to organize a productive training process it is needed to have a certain personal and professional qualities, such as creative approach in training, ability to make audience interested when studying, explain information clearly, search individual approach to students. Instructors play a key role in training innovation. They are the "process owners" or "gatekeepers" of the research and teaching activities within the training. Digital tools offer a wide range of options to enhance training, if they are embedded into innovative instruction concepts, but the design of innovative training scenarios that include and make effective use of them demands the development of new competences for instructors.

Competency research represents an aspect of the discussion on the integration of new technologies when training. Its main interest is on the role of the human factor in this process of technological innovation and institutional change competency is, at its core, dealing with the development of personal competency.

Aviation engineer cannot innovate in a company without developing the competency of the members of that organization. In current human resource management models, the individual competency of the aviation staff is defined as the most limited resource of the company.

Thus, aviation staff needs to be aware of, and understand, the potential of the professional competency that is available for its performance. Aviation engineer need to develop specific, appropriate and new competency to cope with the technological challenges in his workplace.

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